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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/507,048	09/08/2004	Tian-Quan Cai	21049P	8858

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EXAMINER	
PACKARD, BENJAMIN J	

ART UNIT	PAPER NUMBER
4173	

MAIL DATE	DELIVERY MODE
10/23/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/507,048	CAI ET AL.	
	Examiner	Art Unit	
	Benjamin J. Packard	4173	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 September 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *(2 sheets)*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1 and 3 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for reducing A-beta formation and treating Alzheimer's disease, does not reasonably provide enablement for prevention of either. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to practice the invention commensurate in scope with these claims.

To be enabling, the specification of the patent must teach those skilled in the art how to make and use the full scope of the claimed invention without undue experimentation. In re Wright, 999 F.2d 1557, 1561 (Fed. Cir. 1993). Explaining what is meant by "undue experimentation," the Federal Circuit has stated:

The test is not merely quantitative, since a considerable amount of experimentation is permissible, if it is merely routine, or if the specification in question provides a reasonable amount of guidance with respect to the direction in which the experimentation should proceed to enable the determination of how to practice a desired embodiment of the claimed invention. PPG v. Guardian, 75 F.3d 1558, 1564 (Fed. Cir. 1996).

The factors that may be considered in determining whether a disclosure would require undue experimentation are set forth by In re Wands, 8 USPQ2d 1400 (CAFC 1988) at 1404 where the court set forth the eight factors to consider when assessing if a disclosure would have required undue experimentation. Citing Ex parte Forman, 230 USPQ 546 (BdApls 1986) at 547 the court recited eight factors:

1) the quantity of experimentation necessary,

2) the amount of direction or guidance provided,

3) the presence or absence of working examples,

4) the nature of the invention,

5) the state of the prior art,

6) the relative skill of those in the art,

7) the predictability of the art, and

8) the breadth of the claims.

These factors are always applied against the background understanding that scope of enablement varies inversely with the degree of unpredictability involved. In re Fisher, 57 CCPA 1099, 1108, 427 F.2d 833, 839, 166 USPQ 18, 24 (1970). Keeping that in mind, the Wands factors are relevant to the instant fact situation for the following reasons:

1. The nature of the invention, state and predictability of the art, and relative skill level

The invention relates to the treatment of Alzheimer's disease. The relative skill of those in the art is high, that of an MD or PHD. That factor is outweighed, however, by the unpredictable nature of the art. As illustrative of the state of the art, the examiner cites Citron, Nature Neuroscience 5, 1055 - 1057 (2002). Citron discloses that even with breakthroughs in drug development, uncertaininty of treatment still remains (page1057, first full paragraph).

2. The breadth of the claims

Since the instant specification provides no limiting definition of the term "prevention", the examiner will adopt the broadest reasonable interpretation for same. Webster's Ninth New Collegiate Dictionary defines "prevention" as "to keep from happening or existing", i.e., to completely eradicate.

The claims are thus very broad insofar as they recite the "prevention" of A-beta formation and Alzheimer's disease, i.e., the complete eradication of same. While such "prevention" might theoretically be possible under strictly controlled laboratory conditions, as a practical matter it is nearly impossible to achieve in the "real world" in which patients live; Alzheimer's disease is always a risk.

3. The amount of direction or guidance provided and the presence or absence of working examples

The specification provides no direction or guidance for methods of prevention. No reasonably specific guidance is provided concerning useful therapeutic protocols for

treating, other than already known in the art. Nothing is corroborated by working examples.

4. The quantity of experimentation necessary

Because of the known unpredictability of the art, and in the absence of experimental evidence, no one skilled in the art would accept the assertion that the instantly claimed agents could be predictably used to prevent the disease as inferred by the claim and contemplated by the specification. Accordingly, the instant claims do not comply with the enablement requirement of §112, since to practice the invention claimed in the patent a person of ordinary skill in the art would have to engage in undue experimentation, with no assurance of success.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 3-8 are rejected under 35 U.S.C. 102(b) as being anticipated by BISGAIER et al (WO 99/38498), as evidence by WOITUN et al (US 5,726,205).

BISGAIER et al discloses a method of preventing and treating Alzheimer's Diesase by administering avasimibe (same as instant claim 8 formula vii), a lipid regulator which lowers trigycerides (page 6 lines 16-17, page 7 line 4, and claims 9 and

20) with simvastatin and lobastatin (claims 9 and 20). WOITUN et al defines inhibitors of the enzyme HMG-CoA-reductase as 3,5-dihydroxycarboxylic acids of the statin type and the .delta.-lactones, of which lovastatin and simvastatin are in the family (column 1 lines 60-62). Therefore the pharmaceutical form disclosed in BISGAIER et al is the lactone form.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over BISGAIER et al.

BISGAIER et al discloses a method of preventing and treating Alzheimer's Diesase by administering avasimibe (same as instant claim 8 formula vii), a lipid regulator which lowers trigycerides (page 6 lines 16-17, page 7 line 4, and claims 9 and 20) with simvastatin and lobastatin (claims 9 and 20). BISGAIER et al does not specifically disclose preventing or reducting A.beta formation, but it would be obvious to one skilled in the art based on the data provided that the administration of the composition will obviously reduce A.beta. formation (see page 18 lines 3-7 and table 7).

Claims 2-8 rejected under 35 U.S.C. 103(a) as being unpatentable over EMERY et al (Annals of the New York Academy of Sciences 903:229-238, 2000), in view of VEECH (US 6,323,237), and further in view of BOCAN (US 6,093,719).

EMERY et al discloses both vascular dementia and Alzheimer Syndrome (also known as Alzheimer's disease) can have the same underlying mechanism of inflammation. (page 236 first full paragraph, 2nd full paragraph). EMERY et al further suggests studying the role of inflammation between the two.

Further, VEECH discloses vascular dementia can be considered a vascular ischemic syndrome where one of the symptoms is lesions causing restricted blood flow, as evidenced by (column 3 lines 21-23) and contains the accumulation of A.beta. amyloid (column 4 lines 24-26) which is treated when treating Alzheimer Syndrome (column 5 lines 1-9).

While EMERY et al and VEECH make the connection between Alzheimer Syndrome and vascular ischemic syndromes, they do not disclose specific methods of treatment.

BOCAN discloses the method of treating a with the ACAT inhibitor of instant claim 8 formula vii (see column 5 lines 20 to column 6 lines 39, where X=O, R1=two branched alkyl substituted phenyl, Y=CH2, and R2= three branched alkyl substituted phenyl) and simvastatin or lovastatin (column 2 lines 40-44) where the disease to be treated is a vascular ischemic syndrome (column 2 lines 31-39).

One of ordinary skill applying the disclosure of EMERY et al would be motivated to substitute treatments of vascular dementia and Alzheimer Syndrome when treating a patient with either. Because vascular dementia is a class of vascular ischemic syndromes, the disclosure of BOCAN, which treats vascular ischemic syndromes, could then be applicable to treating Alzheimer Syndrome. This would lead one of skill to use to method of BOCAN for treating Alzheimer Syndrome. When treating Alzheimer Syndrome, the treatment for the reduction of the A.beta. formation is obvious because the build up of A.beta. formation is one of the causes of Alzheimer Syndrome.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin J. Packard whose telephone number is 571-270-3440. The examiner can normally be reached on M-R 9-4:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ardin H. Marschel can be reached on 571-272-0718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

17 October 2007
BP

10/19/07
ARDIN H. MARSCHEL
SUPERVISORY PATENT EXAMINER